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(54) METHOD FOR MEASURING COMBINED AMOUNT  
OF NITRATE NITROGEN AND NITRITE NITROGEN

(57) Abstract:

PURPOSE: To accurately calculate nitrogen content, by calculating wavelengths absorb ing specific ultraviolet rays with respect to two kinds of standard specimens respectively individually containing nitrate nitrogen and nitrite nitrogen and measuring the ultraviolet absorption of a specimen to be measured on the basis of the calculated wavelengths.

CONSTITUTION: Ultraviolet abosorption spectra A, B are measured with respect to standard specimens respectively individually containing nitrate nitrogen and nitrite nitrogen, for example, in an amount of 0.1ppm and wavelengths  $\lambda_2$ ,  $\lambda_3$  wherein the differences ( $E_{21}-E_{22}$ ), ( $E_{31}-E_{32}$ ) of respective absorbancies of the spectra A, B become equal, are calculated. For example, the difference  $E_2-E_3$  of absorbancies at  $\lambda_2=223\text{nm}$  and  $\lambda_2=232\text{nm}$  comes to 0.14. Absorbancies at wavelengths  $\lambda_2$ ,  $\lambda_3$  are measured with respect to a specimen to be measured to calculate the difference  $E_2'-E_3'$  of absorbancies. The difference  $E_2'-E_3'$  of absorbancies and the difference  $E_2-E_3$  of absorbancies are proportional to nitrogen content. Therefore, the total nitrogen content in a solution mixture containing

nitrate nitrogen and nitrite nitrogen can be accurately calculated from the absorbancy measurement of the wavelengths  $\lambda_2$ ,  $\lambda_3$  and this method is useful for the monitoring of environmental contamination.

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